Definitions and Concepts for AQA Chemistry GCSE

Topic 9 - Chemistry of the Atmosphere

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*Definitions in **bold** are for higher tier only*

Definitions marked by '' are for separate sciences only*

Definitions have been taken, or modified from the AQA Specification for GCSE Chemistry, 8462, Version 1.1 04 October 2019.

Acid rain: Rain that is acidic due to dissolved gases, such as sulfur dioxide, produced from the burning of fossil fuels.

Carbon footprint: The total amount of carbon dioxide and other greenhouse gases emitted over the full life cycle of a product.

Environmental implication: The effect that the activity has on the environment.

Fossil fuels: Natural fuels such as coal and gas, formed in the past from the remains of living organisms.

Global climate change: A long-term shift in global climate patterns.

Global dimming: A gradual reduction in the amount of light reaching the Earth's surface. This can be caused by carbon particulates.

Greenhouse effect: The increase in the temperature of the Earth's atmosphere due to the greenhouse gases in the atmosphere trapping infra-red radiation from the surface.

Greenhouse gases: Greenhouse gases include water vapour, carbon dioxide and methane. Greenhouse gases in the atmosphere maintain temperatures on Earth high enough to support life.

Particulates: Particulates cause global dimming and health problems for humans. Carbon particulates (soot) are a product of incomplete combustion.

Photosynthesis: Oxygen was produced in the early atmosphere by photosynthesis of plants and algae. This simultaneously decreased the amount of carbon dioxide in the early atmosphere. Equation for photosynthesis: $6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$.

Pollutants: A substance introduced into the environment that has undesired effects.